



Shooting Cold

Tips and techniques for creating successful images in temperate seas. **TEXT AND PHOTOGRAPHY BY STEPHEN FRINK**

I'VE SPENT my life capturing images in tropical waters, but every now and then I've had occasion to shoot in cold water.

Sometimes, regrettably, the results were less than spectacular. There are two projects in particular that I wish I could revisit. One was in the kelp forests of Southern California and one was in the Poor Knights Islands of New Zealand. In both cases I had only a couple of days to shoot, and no real opportunity to see my film on location. In both cases, my

images were dark and dreary. This was a real shame because many of the subjects I saw were extraordinarily colorful and dramatic. They deserved good photography. Why did the vision of my mind's eye fail to translate to film?



This was a question I pondered again recently on a photo tour from Vancouver, British Columbia to Juneau, Alaska. However, this time I was shooting a housed Canon EOS1DMKII digital camera, so I was able to review my results immediately on the camera's LCD. The images turned out great (if I do say so myself), and clearly digital was a huge advantage when shooting in these unfamiliar conditions. Still, I wrestled with the question: What is it about cold water photography that makes it more difficult to begin with?

GET COMFORTABLE

One obvious consideration is personal comfort. It's hard to take quality underwater photographs when you're uncomfortable, and cold water can make you uncomfortable quickly.

Fortunately, with modern dry suits and accessories, you can beat the cold. My advice: trust the new technologies and buy in. A proper dry suit should be combined with a good hood and, for photography, the right gloves. You'll need a level of finger dexterity to operate the housing controls. On my recent

cold-water trip, I started out wearing tropical gloves to ensure maximum control, but found that the cold was just too much to bear. Any discomfort that shortens a dive will affect the number of quality images that can be captured, not just because you'll have less time in the water, but because you'll be distracted by the suffering you endure before you give up. The boat I was on had three-finger titanium mitts for loan, and they were warm enough, but too clumsy for some of the small dials on my strobes. By far the best solution for photography is dry gloves. Within this broad category there are different solutions from different manufacturers.

In addition to the cold, another factor that will affect your performance in cold water is your level of comfort while diving in a dry suit. Everyone on our trip was a savvy tropical diver, but that didn't prevent some from having issues with dry suit diving. We had to use far more weight than we do in tropical climes; and in compensating for the weight at depth, a few divers found themselves shooting recklessly to the

surface as the air in their suits expanded more quickly than they could vent upon ascent. Issues of buoyancy seemed to be the biggest concerns, but were generally sorted out a couple of days into the trip. Proper training in dry suit diving and better yet, experience, are important considerations for any cold water photographer.

GET LIGHT

The low level of ambient light is a major issue in cold-water photography. In the nutrient-rich waters of the Emerald Sea, much less light penetrates from the sun than in the tropics. I found meter readings in just 30 feet of water down around f-2.8 with ISO 100, whereas the same depth would likely to give me an f-8 reading in the clear Caribbean. There might be 200 feet of lateral visibility under Antarctic ice, but the ice cap will diminish illumination from the surface, as will kelp fronds in other temperate seas. As a result, cold-water shooters will always have to consider both horizontal and vertical light penetration when evaluating shutter speed and aperture combinations.

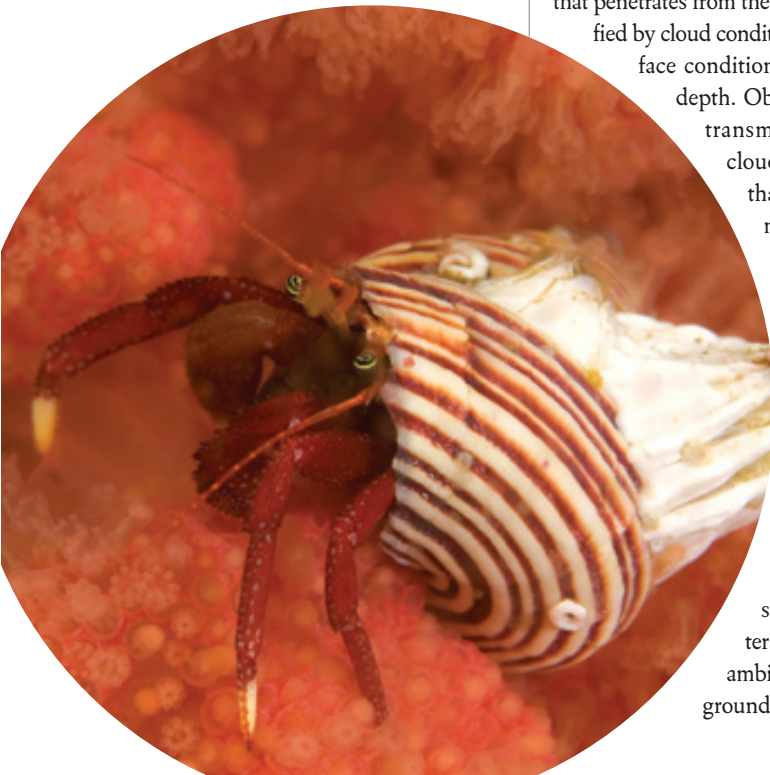
VERTICAL LIGHT: This is the light that penetrates from the surface and is modified by cloud condition, time of day, surface conditions, water clarity and depth. Obviously, sunny days transmit more light than cloudy days, noon more than dusk, slick water more than waves, clear more than turbid, and shallow more than deep. This is the light that affects the backgrounds in wide-angle photographs. The best solution to dealing with low levels of vertical light is to slow down the shutter speeds to allow more ambient light in the background. Much of the wide-

angle work done by cold-water specialists is accomplished with shutter speeds of 1/30th of a second and slower. This, obviously, does not affect the strobe light striking the primary subject in the foreground, but can change a background from black to light green. Another way to get more ambient light in the background without overexposing strobe-lit foregrounds is to combine wider apertures with a lower strobe power setting.

HORIZONTAL LIGHT: Even at strobe-to-subject distances of three feet and less, the power settings and apertures that may work in tropical waters need refinement. This is where I've had problems in the past, because not only does the water column absorb more light, many of the creatures reflect less light than their Caribbean counterparts. On some of my life-size 100mm macro shots of tiny sculpin and nudibranchs from this trip, I even saw the tiny eyes and body structure of microscopic life appearing in the image. This indicates that the water wasn't dirty but that my photo subjects were light-suckers. In situations where I would normally choose f-11 for a strobe value on a Caribbean subject three feet away, I was probably shooting at f-5.6 in Alaska.

GET FOCUSED

Low light levels at depth and lack of contrast between subject and background make it difficult to depend on autofocus in cold water. In Alaska and British Columbia, I found that there was so much life cloaking the rocks that the camera often couldn't decide what it was supposed to focus on. However, shooters using strobes with powerful model lights such as the Ikelite DS125 and 200 series found them to be terrific in terms of autofocus assist. These model lights were equally valuable for finding subjects. This was such an issue that photographers normally thrilled with their trusty Nikonos SB105s were borrowing spare Ikelites from others on the trip. In cold, dark water, some means of autofocus assist lighting is practically mandatory. That can be a strobe with a powerful model light, or it can be a flashlight conveniently





affixed to the housing. Ultralight Control Systems makes a nice flashlight holder that can screw into an accessory thread on a housing, and Light & Motion features a dedicated model light designed just for this application.

Then again, this is a good opportunity to rediscover manual focus. Most Nikon housings offer the ability to shift between auto and manual focus with their popular 60mm and 105mm macro lenses, and the high-end Canon digital SLRs have a custom menu setting that removes autofocus from the shutter release button and transfers that functionality to the "*" button instead. This is a circumstance where autofocus sometimes simply won't work. The best housings are those that allow the creative control to go back to manual focus when needed.

GET CLOSE

In cold water, it's important to have the right tool for the job. With so many small, colorful creatures inhabiting the rocks, a macro telephoto in the 100-105mm range is a terrific tool. Many of the sessile creatures will tolerate the intrusion of a wire framer, so a Nikonos shooter with extension tubes



can do pretty well here. But obviously some of the more skittish fish are best approached from a modest distance. Larger fish, like wolf eels and ling cod, can be better captured with 50-60mm macro lenses. I found my 16-35mm zoom lens particularly useful as well. I could shoot the larger fish working in the 35mm range, but when a dramatic wide-angle vista appeared, I could zoom wide and shoot that as well. A few dives were appropriate for the super-wide, like my 13mm on the Nikonos RS or housed 15mm fisheye, but those were for large subjects like sea lions in turbid conditions. The optical universe seemed to be three feet and less, so the task was to choose the right lens to capture whatever subjects might be appropriate for that very specific distance range.

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